

IN THE CLAIMS

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Please amend the claims as follows:

1.32. (cancelled)

33. (original) A method of probing a material under investigation comprising the steps of:

transmitting an ultrasound beam into the material under investigation;
receiving echoes generated by interactions between the transmitted ultrasound beam and the material under investigation;
generating first data using the received echoes, the first data having values associatable with time and a number of positions in a first spatial dimension, the number of positions being at least 64 and the association with the number of positions being independent of the association with time; and
transforming the first data into second data having values associatable with at least the first spatial dimension and a second spatial dimension.

34. (original) The method of claim 33, wherein the number of positions is at least 128.

35. (original) The method of claim 33, wherein the number of positions is at least 256.

36. (original) The method of claim 33, further including the step of receiving second echoes generated by interactions between a second ultrasound beam and the material under investigation.

37. (original) The method of claim 36, further including the step of generating third data using the received second echoes, any combination of the first data and the third data having the same dimensionality as the first data.

38. (original) The method of claim 33, wherein the second data is echolocation data.

39. (original) A method of generating echolocation data comprising the steps of:
generating first data by converting echoes into electronic signals, the first data having a plurality of values associatable with time and separately associatable with a plurality of positions in at least one spatial dimension, the plurality of values including phase and magnitude information; and generating the echolocation data using the first data and a data transform responsive to the phase or magnitude information, the echolocation data having at least one value derived from two or more members of the plurality of values associatable with different positions in the plurality of positions.

40. (original) The method of claim 39, wherein the at least one value is not generated using interpolation between members of the plurality of values.

41. (original) The method of claim 39, wherein a plurality of values in the echolocation data are each derived from members of the plurality of values having different positions in the at least one spatial dimension.

42. (original) The method of claim 39, wherein the echoes are received by a plurality of transducer elements and the different positions of the two or more members of the plurality of values are separated by at least twice the shortest distance between any two members of the plurality of transducer elements.

43. (original) The method of claim 39, wherein the data transform is responsive to the phase information.

44.-71. (cancelled)